38. (Unamended) The method of claim 35, wherein the winds aloft information is transmitted from the data center to the aircraft via a telephony communication link.

39. (Unamended) The method of claim 35, wherein the winds aloft information is transmitted from the data center to the aircraft via a satellite communication link.

REMARKS

Claims 1-39 are presented for consideration, with Claims 1, 6, 8, 9, 14, 19, 24, 28, 32 and 35 being independent.

The independent claims have been amended to further distinguish Applicants' invention from the cited art.

Initially, Claims 1-5, 24-30, 32-35, 38 and 39 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Crabill '024. Claims 6 and 7 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Cline '775, Claims 8 and 14-23 stand rejected as allegedly being anticipated by Zheng '816, and Claims 9-11 stand rejected as allegedly being anticipated by Bateman '756. In addition, Claims 36 and 37 are rejected under 35 U.S.C. §103 as allegedly being obvious over Crabill in view of Cline, Claims 12 and 13 are rejected as allegedly being obvious over Bateman in view of Zheng, and Claim 31 is rejected as allegedly being obvious over Crabill in view of Zheng. These rejections are respectfully traversed.

Applicants' invention as set forth in Claim 1 relates to an apparatus for providing weather information onboard an aircraft, and includes a processor unit which processes weather information after it is received onboard the aircraft from a ground-based source containing a plurality of types of weather information, and a graphical user interface which provides a graphical presentation of the weather information to a user onboard the aircraft. As amended, Claim 1 recites that the graphical user interface includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft.

Claims 6 and 8 relate to an apparatus for providing weather information onboard an aircraft, and also include a processor unit and a graphical user interface. As in Claim 1, these claims have been amended to recite that the graphical user interface includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft. In Claim 6, the graphical user interface also provides a plan view of the weather information and the position of the aircraft to a user onboard the aircraft, and includes a user-selectable option for centering the plan view on the position of the aircraft, even as the position of the aircraft changes. In Claim 8 the graphical user interface provides a plan view of the weather information for a selected altitude to a user onboard the aircraft, and includes a user-selectable option for changing the selected altitude.

Claim 9 relates to a method of providing convection information to an aircraft, and includes the steps of collecting convection information at a centralized data center, providing a specific request from the aircraft for the convection information, and transmitting the convection information from the data center to an aircraft in response to the request.

Claims 14, 19, 24, 28, 32 and 35 also relate to a method of providing different types of weather-related information to an aircraft. These claims have been amended along the same lines as Claim 9 to include the step of providing a specific request from the aircraft for the information, and transmitting the information from the centralized data center to the aircraft in response to the request.

In accordance with Applicants' claimed invention, the user is able to request specific weather information to be transmitted from a ground-based source or a data center. In this way, the information received onboard the aircraft can be tailored specifically to the onboard user's needs and unwanted information is not received.

The primary citation to Crabill relates to an automated weather support system for providing weather information from the ground to the pilot of an aircraft. The weather data is broadcast in blocks by a transmitter 19 to a communications satellite 15, and then rebroadcast to a receiver 22 and a flight processor 25 onboard the aircraft.

In contrast to Applicants' claimed invention, however, Crabill does not teach or suggest, inter alia, an interface that allows a user to request specific information for transmission from the ground-based source to the aircraft. On this point, the Office Action asserts that, with respect to Claims 2 and 3, Crabill's graphical user interface "allows the user to request specific weather information, and what weather information for transmission from the ground-based source to the aircraft." This assertion is respectfully traversed. The weather information system in Crabill is a "broadcast" type system in which data blocks of weather information are automatically and continuously sent to the aircraft. Crabill does not allow for an onboard user to request specific information from the ground-based source. The portion of Crabill referred to in

the Office Action, i.e., column 3-4, lines 56-8, is understood to allow for the pilot to select from data that is already received onboard the aircraft.

Accordingly, reconsideration and withdrawal of the rejection of Claims 1-5, 24-30, 32-35, 38 and 39 under 35 U.S.C. §102(b) is respectfully requested.

The patent to Cline relates to a flight planning system and was cited for its teaching of a processor unit and a graphical user interface that provides a plan view of the weather information and a position of the aircraft to a user onboard the aircraft.

Cline fails to teach or suggest, however, among other features, a graphical user interface that includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft. Accordingly, reconsideration and withdrawal of the rejection of Claims 6 and 7 under 35 U.S.C. §102(b) is respectfully requested.

The patent to Zheng relates to a clear air turbulence detection system and was cited for its teaching of a processor unit and a graphical user interface that provides a plan view of the weather information for a selected altitude to a user onboard the aircraft.

In contrast to Claims 8, 14 and 19, however, Zheng does not teach or suggest, among other features, allowing the user to request specific weather information for transmission from the ground-based source to the aircraft (Claim 8), or transmitting specific weather information from a data center to the aircraft in response to a specific request from the aircraft for that information (Claims 14 and 19). Accordingly, reconsideration and withdrawal of the rejection of Claims 8 and 14-23 under 35 U.S.C. §102(e) is respectfully requested.

The Bateman patent relates to an aircraft weather information system and was cited for allegedly teaching a method of collecting and transmitting convection information from

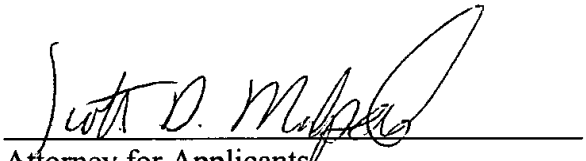
the data center to the aircraft and graphically displaying the convection information onboard the aircraft. In contrast to Applicants' claimed invention, however, Bateman does not teach or suggest providing a specific request from the aircraft for the convection information, and transmitting the convection information from the data center to the aircraft in response to the request. Accordingly, reconsideration and withdrawal of the rejection of Claims 9-11 under 35 U.S.C. §102(e) is respectfully requested.

For the reasons discussed above, none of the cited art teaches or suggests Applicants' claimed invention. Therefore, without conceding the propriety of combining Crabill and Cline, Bateman and Zheng or Crabill and Zheng in the manner proposed in the Office Action, such combinations still fail to teach or suggest Applicants' claimed invention. Therefore, reconsideration and withdrawal of the rejections of Claims 12, 13, 31, 36 and 37 under 35 U.S.C. §103 are also respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) An apparatus for providing weather information onboard an aircraft, comprising:

a processor unit which processes weather information after it is received onboard the aircraft from a ground-based source containing a plurality of types of weather information; and

a graphical user interface which provides a graphical presentation of the weather information to a user onboard the aircraft, and which includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft [one or more user-selectable options for graphically displaying at least one of convection information, turbulence information, icing information, weather satellite information, SIGMET information, significant weather prognosis information, and winds aloft information].

2. (Amended) The apparatus of claim 1, wherein the graphical user interface further includes one or more user-selectable options for graphically displaying at least one of convection information, turbulence information, icing information, weather satellite information, SIGMET information, significant weather prognosis information, and winds aloft information [a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft].

6. (Amended) An apparatus for providing weather information onboard an aircraft, comprising:

a processor unit which processes weather information after it is received onboard the aircraft from a ground-based source; and

a graphical user interface which includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft and provides a plan view of the weather information and position of the aircraft to a user onboard the aircraft, and which includes a user-selectable option for centering the plan view on the position of the aircraft, even as the position of the aircraft changes.

8. (Amended) An apparatus for providing weather information onboard an aircraft, comprising:

a processor unit which processes weather information, including three-dimensional weather information, after it is received onboard the aircraft from a ground-based source; and

a graphical user interface which includes a user-selectable option that allows the user to request specific weather information for transmission from the ground-based source to the aircraft and provides a plan view of the weather information for a selected altitude to a user onboard the aircraft, and which includes a user-selectable option for changing the selected altitude.

9. (Amended) A method of providing convection information to an aircraft, comprising the steps of:

collecting convection information at a centralized data center;

providing a specific request from the aircraft for the convection information;

transmitting the convection information from the data center to an aircraft in response to the request; and

graphically displaying the convection information onboard the aircraft.

14. (Amended) A method of providing turbulence information to an aircraft, comprising the steps of:

collecting turbulence information at a centralized data center;

providing a specific request from the aircraft for the turbulence information;

transmitting the turbulence information from the data center to an aircraft in response to the request; and

graphically displaying the turbulence information onboard the aircraft.

19. (Amended) A method of providing icing information to an aircraft, comprising the steps of:

collecting icing information at a centralized data center;

providing a specific request from the aircraft for the convection information;

transmitting the icing information from the data center to an aircraft in response to the request; and

graphically displaying the icing information onboard the aircraft.

24. (Amended) A method of providing weather satellite information to an aircraft, comprising the steps of:

collecting weather satellite information at a centralized data center;

providing a specific request from the aircraft for the weather satellite information;

transmitting the weather satellite information from the data center to an aircraft in response to the request; and

graphically displaying the weather satellite information onboard the aircraft.

28. (Amended) A method of providing SIGMET information to an aircraft, comprising the steps of:

collecting SIGMET information at a centralized data center;

providing a specific request from the aircraft for the SIGMET information;

transmitting the SIGMET information from the data center to an aircraft in response to the request; and

graphically displaying the SIGMET information onboard the aircraft.

32. (Amended) A method of providing significant weather prognosis information to an aircraft, comprising the steps of:

collecting significant weather prognosis information at a centralized data center;

providing a specific request from the aircraft for the weather prognosis information;

transmitting the significant weather prognosis information from the data center to an aircraft in response to the request; and

graphically displaying the significant weather prognosis information onboard the aircraft.

35. (Amended) A method of providing winds aloft information to an aircraft, comprising the steps of:

collecting winds aloft information at a centralized data center;

providing a specific request from the aircraft for the winds aloft information;

transmitting the winds aloft information from the centralized data center to an aircraft in response to the request; and

graphically displaying the winds aloft information onboard the aircraft.